

WHAT IS CLAIMED IS:

1. A method of depositing an organic material, comprising:
ejecting a carrier gas carrying an organic material from a nozzle at a flow velocity that is at least 10 % of the thermal velocity of the carrier gas, such that the organic material is deposited onto a substrate;
wherein the dynamic pressure in a region between the nozzle and the substrate surrounding the carrier gas is at least 1 Torr.
2. The method of claim 1, wherein the dynamic pressure is at least 10 Torr.
3. The method of claim 2, wherein the background atmosphere is at least 5 Torr.
4. The method of claim 2, further comprising:
ejecting a guard flow from the nozzle.
5. The method of claim 4, wherein the background atmosphere is ambient atmosphere at about 760 Torr.
6. The method of claim 2, wherein the dynamic pressure of at least 10 Torr is affected by a guard flow ejected from the nozzle.
7. The method of claim 6, wherein the background pressure is the base pressure of a vacuum chamber, and is less than about 0.1 Torr.
8. The method of claim 7, wherein the molecular weight of the organic material is greater than the molecular weight of the carrier gas.
9. The method of claim 6, wherein the guard flow comprises a first gas, the carrier gas comprises a second gas, and the molecular weight of the first gas is greater than the molecular weight of the second gas.

10. The method of claim 1, wherein the dynamic pressure is at least about 760 Torr.
11. A method of depositing an organic material, comprising:
ejecting a carrier gas carrying an organic material from the nozzle at a flow velocity that is at least 10 % of the thermal velocity of the carrier gas, such that the organic material is deposited onto a substrate;
providing a guard flow around the carrier gas.
12. The method of claim 11, wherein the method is performed with a background pressure of at least about 760 Torr.
13. The method of claim 11, wherein the method is performed in a glove-box without the use of a vacuum apparatus.
14. A method of depositing an organic material, comprising:
ejecting a carrier gas carrying an organic material from the nozzle at a flow velocity that is at least 10 % of the thermal velocity of the carrier gas, such that the organic material is deposited onto a substrate;
wherein the background pressure is at least about $10\text{e-}3$ Torr.
15. The method of claim 14, wherein the background pressure is at least 0.1 Torr.
16. The method of claim 15, wherein the background pressure is at least 1 Torr.
17. The method of claim 16, wherein the background pressure is at least 10 Torr.
18. The method of claim 17, wherein the background pressure is about 760 Torr.
19. The method of claim 18, wherein the background pressure of at least about 760 Torr is provided by a glove box without the use of a vacuum apparatus.

20. The method of claim 14, wherein the background pressure is achieved without the use of vacuum apparatus.

21. A device, comprising:

a nozzle, further comprising:

a nozzle tube having a first exhaust aperture and a first gas inlet; and

a jacket surrounding the nozzle tube, the jacket having a second exhaust aperture and a second gas inlet;

wherein the second exhaust aperture completely surrounds the first tube aperture;

a carrier gas source and an organic source vessel connected to the first gas inlet;

a guard flow gas source connected to the second gas inlet.

22. The device of claim 21, further comprising a heat source coupled to the guard flow gas source.

23. The device of claim 22, wherein the heat source is conductively coupled to a tube that carries the guard flow to the nozzle.

24. The device of claim 21, further comprising a heat source conductively coupled to the nozzle tube.

25. A device, comprising:

a nozzle assembly comprising a plurality of nozzles, wherein each nozzle further comprises:

a nozzle tube having a first exhaust aperture and a first gas inlet; and

a jacket surrounding the nozzle tube, the jacket having a second exhaust aperture and a second gas inlet;

wherein the second exhaust aperture completely surrounds the first tube aperture;

a carrier gas source and an organic source vessel connected to the first gas inlet of each nozzle; and

a guard flow gas source connected to the second gas inlet of each nozzle.

26. The device of claim 25, further comprising a heat source coupled to the guard flow gas source of each nozzle.

27. The device of claim 25, further comprising a heat source conductively coupled to each nozzle tube.

28. The device of claim 25, wherein a common guard flow gas source is connected to the second gas inlet of each nozzle.

29. The device of claim 25, wherein a common carrier gas source and organic source vessel is connected to the first gas inlet of each nozzle.

30. The device of claim 25, wherein at least three different organic source vessels are connected to different first gas inlets of different nozzles.

31. The device of claim 25, wherein the multiple nozzles are arranged in a line.

32. The device of claim 25, wherein the multiple nozzles are arranged in a two dimensional array.